



BOROUGH OF SUNDERLAND.

REPORT

ON THE

HEALTH AND SANITARY CONDITION
OF THE BOROUGH,
FOR THE YEAR 1876.

BY

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SUNDERLAND :

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1877.

TABLE OF DEATHS

DURING THE YEAR 1876 IN THE URBAN SANITARY DISTRICT OF SUNDERLAND, CLASSIFIED ACCORDING TO DISEASES, AGES, AND LOCALITIES, AND SHOWING ALSO THE POPULATION OF SUCH LOCALITIES, AND THE BIRTHS THEREIN DURING THE YEAR.

DISTRICTS.	POPULATION AT ALL AGES.		Registered Births.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS IN PERSONS UNDER FIVE YEARS OF AGE.																						
	Census 1871.	Esti- mated to middle of 1876.		At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 and upwards.	Smallpox.	Measles.	Scarlatina.	Diphtheria.	Croup (not 'spasmodic.'	Whooping Cough.	Continued Fevers.			Diarrhoea and Dysentery.	Cholera.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	32.		
SUNDERLAND EAST	10,242	374	228	66	46	12	8	56	35	Under 5	..	3	8	..	1	..	..	..	..	17	..	..	..	..	..	..	..	11	..	2	
.....	5 upwds.	..	..	2	..	..	..	5	2	..	4	..	..	1	..	..	..	22	7	9	8		
SUNDERLAND WEST	8,250	264	175	59	35	10	12	39	20	Under 5	..	3	4	..	..	1	1	1	..	13	..	..	..	..	..	..	1	17	..	2	
.....	5 upwds.	..	..	2	..	..	..	1	..	..	3	..	1	..	..	..	..	18	8	9	3		
BISHOPWEARMOUTH NORTH	..	29,700	1276	567	176	131	30	34	116	80	Under 5	..	14	17	1	2	7	..	2	3	30	..	..	1	..	..	..	1	60	1	4
.....	5 upwds.	..	..	10	..	1	3	5	9	5	5	..	..	..	..	1	..	45	32	29	8		
BISHOPWEARMOUTH SOUTH	..	32,700	1428	612	168	106	44	27	133	134	Under 5	..	11	20	1	1	9	1	..	1	38	..	..	..	..	..	..	2	51	..	2
.....	5 upwds.	..	2	9	1	3	..	..	6	2	2	..	1	3	1	..	..	48	39	46	5		
MONKWEARMOUTH	27,450	1067	526	189	115	44	26	81	71	Under 5	..	9	33	4	2	32	..	1	..	29	..	..	1	..	..	..	1	45	..	1	
.....	5 upwds.	..	..	18	2	..	1	1	12	..	2	..	..	..	..	..	..	40	21	20	6		
Public Institutions.	INFIRMARY .....	..	..	24	..	1	2	2	14	5	Under 5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
	5 upwds.	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	1	1	14			
	WORKHOUSE .....	..	..	..	135	4	5	2	12	54	Under 5	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
.....	5 upwds.	..	..	5	..	..	..	5	..	..	2	..	..	..	1	..	..	29	23	..	..
TOTALS	1000,000	108,342	4409	2262	662	439	144	121	497	399	Under 5	..	40	87	6	6	49	2	4	4	127	2	5	184	1	12		
.....	5 upwds.	..	2	46	3	4	4	17	30	1	18	..	2	5	2	1	..	202	131	114	44		



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REPORT, 1876.

IN compliance with the general orders of the Local Government Board, I beg to submit my Third Annual Report on the Health and Sanitary condition of the Borough.

At the outset, it is satisfactory to be able to state that Sunderland again occupies the second place in the Registrar General's Returns.

Of the 20 large cities and towns of England, Brighton heads the list, with a death-rate of 19·5, and Sunderland follows with a rate of 20·8. The highest death-rate for the year was 31·8 in the Borough of Salford, and the average rate in the twenty towns was 23·5.

The total number of Births registered during the year was 4,409, and of Deaths, 2,262, showing a natural increase of population of 2,147, of which number 1,109 were Males and 1,038 were Females.

**BIRTHS AND
DEATHS.**

Of the 4,409 Births registered during the year, 2,287 were Males and 2,122 were Females, making the Birth-rate of the Borough 40·6 per 1,000 of the population as against 42·5 per 1,000 in the year 1875.

BIRTHS.

In the four Registration Districts which comprise the Borough, the Birth-rate was highest in South and North Bishopwearmouth Districts, being 43·6 and 42·9 respectively ; and lowest in Monkwearmouth and Sunderland Districts, viz., 38·8 and 34·5.

The highest number of Births was registered in the first quarter of the year, namely, 1,201, whilst in the three other quarters the average was 1,069.

The total number of Deaths registered as having occurred in the Borough during the year was 2,262, of which number 1,178 were Males and 1,084 were Females, showing a Death-rate of 20·8 per 1,000 of the population as compared with rates of 22·7, 23·6, and 22·4, in the years 1873, '74. and '75.

DEATHS.

REPORT.
Age at Death.

Of the 2,262 Deaths, 1,101 were those of children under 5 years of age, of which number 662 were under a year old. 762 persons died between the ages of 5 and 60 years ; 328 between 60 and 80 ; 66 between 80 and 90 ; and 5 between 90 and 100 years old.

Alice Storey, who died in the Workhouse on the 17th of August, and whose age was returned as 93, was subsequently stated by her friends to have been 100 years and 10 days old.

Average Age at Death.

The average age at death of children under 5 years of age was $11\frac{3}{4}$ months.

The average age at death of persons aged 5 years and upwards was $46\frac{1}{2}$ years.

Decrease of Mortality.

With an estimated population of 2,000 in excess of the previous year, the number of deaths registered was 123 less than in 1875, although during the year Scarlatina and Whooping Cough were fatally prevalent.

The number of Deaths registered in each week during the year ranged from 22 in the week ending February 26th, to 68 in the week ending December 30th.

The lowest number of Deaths was registered in the first two quarters of the year, viz., 522 and 511, whilst in the last two quarters the numbers were 605 and 624 respectively.

Mortality in Registration Districts.

In the Sunderland Registration District, which formerly attained an unenviable notoriety in consequence of its high death-rate and excessive mortality from Fever, the death-rate was only 21·5 per 1,000 of the population, as against 25·7 in 1873, 26·6 in 1874, and 24·6 in 1875. The Town Improvement Bill of 1867, which anticipated the Artizans' Dwellings' Act of 1875, has by its provisions been the means of sweeping away most, if not all, of the old Fever dens in this and other portions of the Borough, and the opening out of good wide thoroughfares, which, by affording free light and better ventilation, has acted most beneficially on the health of the poorer classes of the community, who, in this locality, form by far the large proportion of the population.

In May, on my recommendation, a great Sanitary improvement was made in the manner of cleansing this part of the Borough, to which reference is made further on in this report, and which

it cannot be doubted has had considerable effect in improving the general health of the District, while it has certainly added much to the comfort of its inhabitants. REPORT.

In North Bishopwearmouth District, the number of Deaths registered, exclusive of those which took place in the Workhouse and its Hospitals, which are in this District, was 567, being equal to a death-rate of 19·0 per 1,000 of the population. During the year, 135 Deaths took place in the Workhouse and Workhouse Fever Hospital, which had the effect of increasing the death-rate of the District to 23·6. North Bishopwearmouth.

In South Bishopwearmouth District, in which house building is rapidly going on, with its accompanying increase of population, the deaths, exclusive of those which took place in the Infirmary, which is situated in this District, numbered 592, being equal to a death-rate of 18·1 per 1,000. South Bishopwearmouth.

The number of Deaths in the Infirmary during the year was 24, which increased the death-rate of the District from 18·1 to 19·4 per 1,000. Infirmary.

In Monkwearmouth District, the Deaths numbered 526, producing a death-rate of 19·1 per 1,000 of the population, as compared with 18·5 and 17·4 in the years 1874 and 1875. Monkwearmouth District.

The increase in the Mortality of this District was mainly due to an outbreak of Scarlatina and Whooping Cough, from which diseases 84 children died. Enteric Fever also carried off 13 persons.

The District was very unhealthy, especially during the last quarter of the year. The condition of many of the houses and streets in the neighbourhood of Monkwearmouth Colliery, and of certain premises where Enteric Fever broke out, was very unsanitary. A serious outbreak of Enteric Fever, resulting in the deaths of 3 young persons, took place in a beer house in Howick Street, and there can be no doubt that the disease was caused by the defective Sanitary arrangements of the house and those of the adjoining premises. The owner of the property would not make the necessary alterations and improvements required until compelled to do so by a Magistrate's order. Since the necessary works have been done, no further outbreak of the disease has occurred.

REPORT.
CAUSES OF
DEATH.

In considering the causes of Death, our attention is naturally turned in the first instance to that class of diseases termed Zymotic, and which are looked upon, to a certain extent, as preventable diseases.

Zymotic
Diseases.

Of the 2,262 Deaths registered, 19 were ascribed to Typhus Fever, 34 to Typhoid or Enteric Fever, 133 to Scarlatina, 53 to Whooping Cough, 42 to Measles, 9 to Diphtheria, 141 to Diarrhoea, and none to Smallpox, making a total of 431 Deaths from the seven principal Zymotic Diseases, being equal to a death-rate of 3·9 per 1,000, and forming 19·0 per cent. of the total deaths.

The Deaths from this class of disease show an increase of 41 as compared with the previous year, the increase being as follows : Enteric or Typhoid Fever, 13 ; Scarlatina, 72 ; Measles, 37 ; and Diphtheria, 1—making a total of 123, against which must be placed a decrease of 80 in the number of deaths from Whooping Cough, and of 2 from Typhus Fever.

Of the 431 Deaths from the principal Zymotic Diseases, 393 were under 16 years of age, and 38 only those of Adults. Of the Adult Deaths, 11 were from Typhus Fever, 12 from Typhoid Fever, 14 from Diarrhoea, and 1 from Scarlatina.

Typhus and
Enteric Fever.

There was a decrease of 2 in the number of Deaths from Typhus Fever, and an increase of 13 from Enteric or Typhoid Fever, as compared with the previous year.

In every case of death from either of these diseases careful enquiry was made as to the predisposing or exciting causes of the disease, with the following results :—

CAUSES OF DEATH.	TYPHUS FEVER.		ENTERIC FEVER.	
	No. of Cases.		No. of Cases.	
Unsanitary Condition of Premises	3	....	14	
Destitution	5	....	1	
Intemperance and Destitution	2	....	—
Exposure to Inclement Weather	2	....	3	
Supervened upon attacks of other Diseases	2	....	2	
Following Parturition	1	....	1	
Came into District ill from the Disease	4	....	—
Unascertainable ; Sanitary condition of Houses and Premises good . . . .	—	....	13	
Totals	19		34	

The Deaths from Scarlatina numbered 133, of which number REPORT.
 6 were those of children under a year old, 82 were 1 and under Scarlatina.
 5 years of age, 41 between 5 and 10, 3 between 10 and 20, and
 1 between 30 and 40 years of age. The disease was most fatal
 in Monkwearmouth District, in which 51 deaths were registered.

42 Deaths were registered as arising from Measles, 2 only Measles.
 being over 5 years of age. 14 of the deaths occurred in
 Bishopwearmouth North District, and 13 in Bishopwearmouth
 South District.

Whooping Cough carried off 53 children, 33 of whom died Whooping
Cough.
 in Monkwearmouth District.

9 Deaths from Diphtheria were registered, 6 of which Diphtheria.
 occurred in Monkwearmouth.

The Deaths from Diarrhoea numbered 141, of which number Diarrhoea.
 109 occurred during the Autumn months of July, August, and
 September, and when the mean temperature of the atmosphere
 was a little over 60 degrees Fahrenheit. In the first quarter of
 the year 2 deaths only were registered, in the second quarter, 4,
 and in the fourth, 23.

Of the 141 Deaths, 93 were those of children under a year
 old, of whom 67 had been fed by the bottle,—a very evident
 proof of the fatality attending this system of Infant feeding,
 unless extreme care be taken as regards the purity and sweetness
 of the Milk supplied, and especially as regards the scrupulous
 cleanliness of the bottle used, and the tubes, &c., connected with
 it.

In every case of death or sickness from any infectious or
 contagious disease brought under the notice of the Medical
 Officer, enquiries were made as to the cause and origin of the
 disease, the premises occupied by the patients were visited,
 notices served upon the owners to cleanse and disinfect, and
 proper instructions given as to the best means to be adopted to
 prevent the further progress of the disease. In 26 instances, the
 premises were disinfected by one of the Sanitary Inspectors.

REPORT.

During the year, 950 cases of Infectious Diseases were visited by the Medical Officer and Sanitary Inspectors. 16 articles of clothing, bedding, &c., were burnt, and replaced by new ones, at the expense of the Local Authority. A number of articles were also sent to the Disinfecting Chamber to be disinfected by heat. The only wonder is that a far larger quantity of clothing was not sent, seeing that the Corporation offered to disinfect all infected clothing free of charge. It is to be hoped that in the future the public will take more advantage of this effectual method of preventing the spread of disease than they have done in the past.

It will have been observed in my previous remarks that the Mortality from the 7 principal Zymotic Diseases was excessive in the Monkwearmouth District; in fact, one-third of the total deaths from these diseases occurred in this portion of the Borough—the greater proportion of which took place in one particular locality, namely, that of the Monkwearmouth Colliery. Scarlatina was exceptionally fatal in that neighbourhood; and in November a house to house visitation through 9 streets was made by myself, accompanied by Inspector McKay, the result being that we found 44 cases of Scarlatina in 19 families. In many of these cases it was clearly shown that the disease had been contracted by either parents or children visiting infected houses; whilst in others it was alleged by the parents that their children took the disease at school—a very likely thing to occur, when we consider that many cases of Scarlatina are of so mild a character as not to necessitate the calling in of a Medical man, and consequently a child is sent back to school much sooner than it ought to be, and so carries disease to his or her playfellows, which proves in many cases fatal in its result. The amount of carelessness and indifference shown by parents and guardians in reference to Infectious Diseases is much to be deplored; and notwithstanding the various means adopted to warn such persons against visiting infected houses, &c., the fact still remains that, in case of a death from Scarlatina, Measles, or Fever, children and adults are admitted into the houses where the death has taken place, mostly with a view of gratifying an idle and dangerous curiosity. The sympathy felt by one person for another under affliction, is much to be admired in all classes of society, but such

sympathy can be shown in other and better ways than by allowing young children to visit infected houses, and so carrying away with them the germs of a disease which may ultimately prove a terrible scourge in their own families.

REPORT.

The Town Council have kindly given me permission to publish a Map of the Borough with my Report. This Map will, I think, be found very useful, as not only showing the Borough boundaries and the boundaries of the several Registration Districts, but also localities in which Fever, Scarlatina, and Diarrhoea have made their appearance during the year.

The publication of such a Map from year to year, will indicate how far the Sanitary measures adopted and carried out for the prevention of disease have been successful.

Of the 2,262 Deaths, 347—being 37 less than in the previous year—were referred to Diseases of the Lungs, of which number 176 were Males, and 171 were Females. Diseases of the Lungs.

The mortality was greatest in children under a year old, 56 males and 43 females having died under that age. Between the ages of 60 and 90, 38 males and 36 females, or a total of 74 died, leaving the number who died between the ages of 1 and 60 almost exactly equal to the number who died under and above those two ages. Bronchitis and Pneumonia were the diseases to which five-sixths of the deaths were referred, whilst 17 were due to Asthma—a disease, as it would appear, peculiar to Sunderland Parish, as 13 out of the 17 deaths took place in that part of the Borough.

During the year, Phthisis, or Tubercular Disease of the Lungs, Phthisis. proved fatal in 221 instances, causing one-tenth of the total mortality of the Borough. In the year 1875, there were 177 deaths from this disease, showing an increase last year of 44.

Of the 221 deaths, 172 took place between the ages of 15 and 50. The age at which the disease was most fatal, was between 20 and 30, between which ages 61 persons died, namely, 27 males and 34 females.

REPORT.

Diseases of the
Nervous System.

339 deaths were referred to Diseases of the Nervous system, of which number 173 were those of children under 5 years of age, 117 being under a year old.

The largest number of deaths in this class of disease was attributed to Convulsions, a disease from various causes, preventable and unpreventable, peculiarly fatal during the first year of Infant life, as may be inferred from the fact that, of 137 deaths registered as arising from this disease, 101 were those of children under a year old. Apoplexy and Paralysis were the next most fatal diseases of this class, 72 deaths being referred to the latter, and 42 to the former disease. These diseases were most fatal in North Bishopwearmouth District, in which the Workhouse is situated, in which Institution such diseases are of common occurrence amongst the aged paupers.

Atrophy and
Marasmus.

The only other causes of death to which I desire to make special reference, are Atrophy and Marasmus—diseases which are synonymous—and from which 141 children died during the year, 96 of whom were under a year old.

The children who die from this affection almost exclusively belong to the working classes. The disease, as its name implies, is characterised by a gradual wasting away, or withering, produced by defective nutritive power, induced in a large number of cases by the uses of improper and indigestible food. Any one, who is in the habit of visiting the homes of the poor, must be struck with astonishment at times at the manner in which infants are fed. It is not so much that the food given them is not good and wholesome in itself, but that it is utterly unfit for children of such tender years. If mothers would take care of their own health, and nurse their children themselves, during the first 8 or 9 months of infancy, and not depend so much upon artificial feeding, much less would be the sacrifice of Infant life.

The question of Infant feeding is a most important one, and much good might be done could the proper means be devised for imparting to parents and others the necessary instructions as to the most desirable method of feeding young children, as there are many young mothers, and even older ones, too, who are sadly deficient in knowledge on this subject. The Doctor, of course,

is able and willing to advise, but, as a rule, he is only called in and his advice sought at a time when any recommendations and suggestions he may be able to make, are of little avail in saving the young life.

It will have been observed that during the year no death was registered as arising from Smallpox, but although there was no death, there were three cases of illness from that loathsome disease.

The first appeared in the month of May, being that of a young lady who had just returned home from India, where the disease was fatally prevalent, and the second was the servant who had been in attendance upon her. The third case was that of a ship captain, who came direct from London to this port. On arriving here, he went to his son's house. Information of the case was given to me by the Officers of Customs, and with as little delay as possible he was removed to the Corporation Hospital. The prompt isolation of these three cases, happily prevented the further spread of the disease.

A table will be found in the appendix of this report, giving as accurately as the returns allowed, the occupations of persons 20 years of age and upwards, who died from various diseases, and from which it would appear that Heart Disease was most fatal amongst Labourers, Licensed Victuallers, and Seamen ; Consumption, amongst Labourers, Shipwrights, Joiners, and Tailors ; Apoplexy and Paralysis most fatal to Seamen, Shipwrights, and Labourers ; and Cancer, to Females.

The table referred to, while interesting to many, would of course be of more practical value were the number of persons engaged in the various occupations named, accurately known.

From the returns made to me by the Medical Officers of the Infirmary, Eye Infirmary, Dispensary, Children's Hospital, Monkwearmouth Dispensary, and Poor Law Districts, it would appear that during the year 6,818 persons, or $6\frac{1}{4}$ per cent of the entire population of the Borough, received gratuitous Medical or Surgical aid. Of this number, 4,409, or a little over 4 per cent. of the population, were recipients at the hands of the Medical Charities of the Town, while 2,409 persons were under the care of the Poor Law Medical Officers.

REPORT.

The returns of Sickness and Deaths are not so complete for the past year as they should be, in consequence of no proper record having been kept of the causes treated at the Dispensary during the third quarter of the year. This, however, is not likely to occur again ; so that in future it is anticipated that the information under this head will be complete, and therefore more valuable.

S A N I T A R Y R E P O R T .

SANITARY
REPORT.

The Sanitary condition of the Borough has been carefully watched and attended to, and the several Districts periodically, and at times specially, inspected, with a view of discovering any conditions calculated to be injurious to health, and where such have been found, prompt action has been taken to remedy the same.

It is with no small degree of pleasure and satisfaction that I refer to the progress made during the past year in favour of Sanitary Reform.

In the beginning of the year it was deemed advisable by the Health Committee that the whole of the Health Department should be placed under the supervision and entire control of the Medical Officer of Health ; and in appointing a new Superintendent of Scavenging, it was recommended to the Council that he should be placed under the Medical Officer instead of the Borough Surveyor. This recommendation was adopted by the Town Council, and on the 1st of May the transfer took place.

Scavenging.

The system of Scavenging was remodelled, the duties of the subordinate officers were clearly defined, so as to insure the time of the men and horses being correctly taken, and proper supervision being exercised over the workmen ; but the most important change made was the one incidentally alluded to in that portion of my report relating to the Mortality of Sunderland Parish, and which consisted principally in the Scuttling being done at night instead of during the day time.

The majority of the houses in this the oldest portion of the Borough, are so constructed as to afford no provision for building of Ashpits or other receptacles for retaining ashes and other refuse until such time as they can be periodically cleansed, the consequence being that carts have to be sent through the streets daily from door to door to collect the refuse, which is placed at the sides of the streets in receptacles of all shapes and sizes. These were generally placed outside the houses early in a morning, and remained there the greater part of the day, being often made use of as footballs by mischievous boys ; whilst in windy weather they were an intolerable nuisance, owing to the dust, &c., being blown about.

**SANITARY
REPORT.**

Scuttling of
Sunderland
Parish.

This system was utterly bad, and lead to garrets and cellars being converted into storehouses for all kinds of refuse ; and, further, those persons who were anxious to keep their rooms in a healthy state, were nevertheless compelled to keep the scuttles and their contents within their houses during the night, which could not but have an injurious effect upon their health.

On the 1st of May, the Scuttling began at seven o'clock in the evening, and was completed between ten and eleven p.m. This arrangement has been continued, and works admirably. The cleanly appearance of that part of the town now during the day compared with what it was under the old system, is most marked ; whilst the removal of some 20 or 30 cart loads of refuse every evening, instead of its being allowed to remain all night in houses closely shut in, must have proved as beneficial to the health as it has added much to the comfort of the inhabitants.

The most important subject which engaged the attention of the Health Committee during the year, was the discussion upon, and subsequently the adoption of, a scheme for the more effectual cleansing of the Borough—a scheme characterized by the local press as the most important, most radical, and most comprehensive measure of Sanitary Reform, adopted since the Town Improvement Bill of 1866.

New Sanitary
Scheme.

In January, 1874, in a Sanitary Report presented by me to the Health Committee, and ordered to be printed, there was a recommendation that the Committee should take up the question of the collection and disposal of house refuse, without delay ; and on June 3rd of the same year a further recommendation was made—"That, in order to secure a thorough and systematic cleansing of the Ashpits, so that the town may be kept in a cleanly and healthy condition, and free, as far as possible, from accumulation of animal and vegetable refuse—so fruitful in the production and spread of disease—the cleansing of such Ashpits should be undertaken by the Corporation, and paid for out of the rates."

On the 19th November, on the motion of the present Mayor (Councillor Storey) a Committee was appointed to take into consideration the question of the entire cleansing of the town ; and the resolution come to by that Committee, was a recommendation to the Council that the Corporation should undertake the systematic cleansing of the Borough.

The question was under consideration from time to time by the Committee, but no definite conclusion was come to until September last, when a resolution was unanimously passed by the Health Committee—"That on and after the 1st of May, 1877, the Corporation take into its own hands the entire cleansing of the Borough ; and that the Medical Officer of Health be requested to make a report and prepare estimates." My report on the details of the scheme, and the estimates, was to the following effect :—

THE PROPOSED SCHEME FOR THE ENTIRE CLEANSING OF THE BOROUGH.

This Committee having agreed to recommend to the Council—"That on and after the 1st of May, 1877, the Corporation take into its own hands the entire Cleansing of the Borough," I have to submit for your approval an estimate of the amount of money which will be required for the carrying out of this important work. This estimate was laid before a Committee composed of Sub-Committees of the Health and Highways Committees, on Saturday last, and ordered to be printed, and a copy sent to each

member of the Council. With this estimate I submit the following details of the scheme, with which it is necessary that you should be acquainted. In the first place, it is essential that with a view of having the work thoroughly and efficiently done, the Corporation should have its own staff of Men and Horses. To attempt to undertake the entire cleansing of the Borough on the Contract system of hiring Men and Horses, would be very expensive, and unsatisfactory in its results. Having, therefore, gone very carefully into the question, I estimate that with 28 first-class Horses, the entire cleansing of the Borough can be efficiently carried out.

The Committee is aware that for some time past much inconvenience has been experienced in both the Health and Highways departments by the want of proper and adequate accommodation for Carts, Brushes, &c., and in looking out for a site on which Stables could be erected, it is desirable that a sufficient quantity of ground should be obtained to meet this want.

The estimated cost of erecting Stables is £3,000, and a like sum is put down for the purchase of 40 Horses—28 of which would be used in the Health Department, leaving 12 available for that of the Highways.

It will be observed, that the cost of the additional staff required for the cleansing of Ash-pits, is not very large. This is owing to the fact, that I propose to utilize my present staff, and work the whole cleansing under one supervision.

At the present time, the Borough is divided into 6 Districts, and there is 1 Foreman to every 2 Districts. I propose to appoint 2 additional Foremen, so that there will be a separate Foreman for Districts Nos. 1, 2, 5, and 6. Nos. 3 and 4, which are in the centre of the town, I propose to place under the supervision, as Foreman, of Mr. Painter, (who, since his appointment as Foreman over Districts 4 and 5, has proved a very efficient and reliable officer) at an increase to his present salary of 4s. per week. The Foremen will have to supervise the cleansing of the Ash-pits in their respective Districts, as well as that of the Streets, which they ought to be well able to do, seeing that they will, with one exception, have only one District each, and that the list of Ash-pits to be cleansed, will be prepared for them daily by the Clerk, whose salary, in consequence of the extra work which he will have to do, I propose to increase from £65 to £80 a year.

I estimate that 5 men, constantly employed, will, with the assistance of the 10 Drivers, be a sufficient number for the emptying of the Ash-pits. Each man will have to throw out some 15 tons of refuse per day, and assist the drivers when necessary in loading. This will not, I think, be an undue amount of labour, as the men who load the wagons at the Depot both sort the manure, and on an average load four wagons a day, containing nine tons each. I have fixed the wages of these men

at 26s. per week each, which is I think not unduly large considering the nature of the work they will have to do. Should this proposal be carried out, there will be 15 Men and 10 Horses employed daily in cleansing Ash-pits.

With reference to the amount of refuse, &c., to be collected, I may state that since the last meeting of the Committee I have had the number of Ash-pits in each District counted, with the result as stated in the estimate. In round numbers, there are 11,000 Ash-pits in the Borough, and estimating that each Ash-pit will hold on an average 5 loads of 12 cwt. per annum, gives a total of 3 tons as the yearly contents of each Ash-pit—so, that the amount of refuse to be collected yearly will be about 33,000 tons. Of this amount, 25 per cent. at least will be removed as heretofore by Farmers, leaving 24,750 tons to be collected by the Corporation, and 10 Horses leading away $6\frac{1}{2}$ loads of 25 cwt. each per day, will amount in round numbers, to 25,400 tons, leaving 7,750 tons to be sent to sea, or otherwise disposed off. I also propose to send the "*Scuttlings*" of Sunderland Parish to sea; these may be reckoned as amounting to from 12 to 15 tons per day, which, with other street refuse, sludge, &c., may possibly be increased to 20 tons. Mr. Iley, on behalf of Mr. French, offers to take to sea 20 tons daily for £4 10s. per week; any quantity over 20 tons to be charged at the rate of 8d. per ton. The total cost of sending this refuse to sea, is estimated at £584 per annum, against which may be placed the value of the manure sold, which is put down at £360, so that the actual cost of the disposal of the town refuse would be £224.

It is scarcely necessary for me to tell this Committee of the great good likely to result, should this proposal receive its sanction, and that of the Council. The question has been so often discussed as to leave but little more to be said. There is just one point, however, to which I would like to refer for the information of those members of the Council who may not know fully the work of this department, and that is the immense amount of labour which devolves upon the Sanitary Inspectors under the present state of things. No less than 8,000 notices were served by the two Inspectors last year for the cleansing of Ash-pits, and on an average each person upon whom a notice had been served, had to be visited three times before such notice was complied with, making some 24,000 visits made by the Inspectors with regard to this one nuisance. Should they be happily relieved of this onerous duty by the action of the Committee, there will still be ample work for them to do under the various clauses of the Public Health Act.

I would only add, in conclusion, that if this scheme is adopted, the Sanitary condition of the town will be greatly improved, and that the Borough of Sunderland will be able to hold its position as one of the healthiest of the large towns in the United Kingdom.

APPROXIMATE NUMBER OF HOUSES AND ASH-PITS IN THE SEVERAL
DISTRICTS OF THE BOROUGH.

	Houses.		Ash-pits.
District No. 1—Sunderland	... 2072	...	325
„ „ 2—Hendon and New Hendon	... 2946	...	2698
„ „ 3—Sans Street to Fawcett Street	... 1529	...	1275
„ „ 4—Fawcett Street to Waggon Way	... 2400	...	1913
„ „ 5—West of Waggon Way	2007	...	1986
„ „ 6—Monkwearmouth	... 3422	..	2786
Total ...	<u>...14376</u>	...	<u>10983</u>

AMOUNT OF REFUSE TO BE COLLECTED AND DISPOSED OF.

	Tons.
11,000 Ash-pits, estimated to contain 5 Loads or 3 Tons each per Annum	... 33000
25 per cent. estimated to be removed by Farmers	... 8250
	<u>24750</u>

Sold to Farmers by Corporation	... 17000
Proposed to be sent to Sea	... 7750
	<u>24750</u>

10 Horses, estimated to remove $6\frac{1}{2}$ Loads per day each, 25 Cwt.
per Load, 25,400 Tons.

In addition to the above, some 20 Tons of Scuttle Refuse, &c., which is collected in Sunderland Parish daily, will also be sent to sea. The cost of collecting this refuse is as heretofore included in the general Scavenging Account.

PRESENT HALF-YEARLY ESTIMATED EXPENDITURE FOR CLEANSING
OF STREETS AND PUBLIC ASHPITS.

	£	s.	d.
Horses, Drivers, &c. ...	1514	8	0
Labour ...	1105	12	0
Emptying Public Ash-pits ...	20	0	0
Tools, Brushes, Repairs, &c. ...	230	0	0
	<u>£2870</u>	<u>0</u>	<u>0</u>

ESTIMATED HALF-YEARLY EXPENDITURE FOR ENTIRE CLEANSING
OF THE BOROUGH.

(The Corporation having its own Men and Horses.)

	£	s.	d.
Proportion of Stable Account (28 Horses, &c.) ...	2264	6	6
Labour ...	1354	18	0
Repairs, Tools, &c. ...	230	0	0
New Carts (10) ...	167	10	0
Cost of sending surplus Refuse to Sea (estimated at 8,120 Tons) ...	292	0	0
	<u>£4308</u>	<u>14</u>	<u>6</u>
CR.—By Sale of Manure ...	180	0	0
Total...	<u>£4128</u>	<u>14</u>	<u>6</u>
	£	s.	d.
Increase of Expenditure on First Half-Year, say	£1258	0	0
Subsequent Half-Years, being less £167 10s. cost of Carts ...	£1090	10	0

Present Rateable Value of the Borough, £319,000 0s. 0d.

HALF-YEARLY COST OF ADDITIONAL STAFF FOR CLEANSING
ASH-PITS, AND INCLUDED IN FOREGOING ESTIMATE
UNDER HEAD OF "LABOUR."

	£	s.	d.
2 Foremen, at 26s. per Week each ...	67	12	0
Addition to Salary of Foreman of Districts 3 and 4	5	4	0
5 Ash-pit Men, at 26s. per Week each ...	169	0	0
Addition to Clerk's Salary ...	7	10	0
	<u>£249</u>	<u>6</u>	<u>0</u>

The recommendation of the Committee, together with the foregoing Report and Estimate, were submitted to the Town Council at its Meeting on the 22nd of November, and after considerable discussion, the report was unanimously adopted, and the standing orders suspended, so that the works necessary for the carrying out of so large a scheme might at once be proceeded with.

The Committee since then has from time to time had under consideration the various details connected with the development of the scheme, and at the time of my writing this report, everything has been so far successfully arranged as will enable me to put it into operation on the day appointed, viz., the 1st of May next.

As the subject has been so fully discussed both in and outside of the Council Chamber, it is scarcely necessary for me to refer to the benefits likely to accrue from the carrying out of the Cleansing Scheme, whereby the whole of the Streets and Ash-pits in the Borough will be cleansed by the Corporation in a systematic manner, and by officials over whom a proper and reasonable supervision can be exercised by those in authority. That a radical change was necessary was clearly shown by the unanimity with which the Council agreed to the proposals for Sanitary Reform submitted to them.

To myself, it is gratifying to find that the recommendation made three years ago has at length been adopted. Had it not been that the supervision and control of the whole department had been transferred to me at the beginning of the year, which enabled me to gain a thorough knowledge of the working of the present system, of contracting for Horses and Men for Scavenging purposes, I should scarcely have been able to have worked out the details of a scheme of Sanitary Reform of so comprehensive a character as the one referred to.

There is no reason to anticipate anything but good results from the carrying out of the proposed plan. It will necessarily take some time before everything works as smoothly and regularly as might be desired, but no doubt some little forbearance will be exercised by the public generally in not pressing at first too heavily on the resources of the department.

In concluding this portion of my report, I take this opportunity of saying how much I feel indebted to The Mayor, The Chairman, Vice-Chairman, and Members of the Health, Highways, and Finance Committees, for the kind and considerate manner in which they have received and adopted the various recommendations connected with the scheme submitted for their approval, and to the Town Clerk (Mr. Snowball,) Deputy Town Clerk, (Mr. S. Alcock, Junr.,) and Mr. J. H. Brown, the Borough Accountant, for the valuable assistance rendered in carrying out the same.

Credit is also due to the Borough Surveyor for the manner in which he carried out the instructions of the Committee in the preparation of the plans for Stable, Granaries, &c.

As it has already been stated our Town Improvement Bill of 1866 anticipated the Artizans' Dwellings Act of 1875. Under the provisions of the former, the Corporation have expended from £80 to £100,000 in improvement schemes in various parts of the town, consequently no official representation has been made under the Artizans' Dwellings Act by the Medical Officer of Health to the Local Authority. During the year, however, 14 houses were ordered to be closed, by order of the Magistrates, as unfit for human habitation. 13 of these have been re-built by the owners, and are now re-occupied.

In 33 instances, notices were served upon the owners of dangerous buildings to have the same pulled down and re-built, or made secure.

During the year, 9,287 notices were served by the Inspectors for the Sanitary Amendment of Houses and Premises, and 281 persons were summoned before the Magistrates for the infringement of the Public Health Act, of which number 130 were convicted and fined, 6 cases were dismissed, and in 145 cases, the summonses were withdrawn on payment of costs, the nuisances having been abated after the issue of the summonses.

Twelve seizures of unsound Meat and Fruit were made, comprising 1,122 lbs. of Beef and Mutton, 119 lbs. of Pork, 1,344 lbs. of Salt Beef, 504 lbs. of Ham and Bacon, 70 lbs. of Dates, 126 stones of onions, 46 Jars of preserved Fruit, and 3 Baskets of Oysters. Two persons were summoned under the Adulteration of Food Act, and each fined 20s. and costs.

SANITARY
REPORT.Common
Lodging Houses

The Common Lodging Houses, numbering 34, are registered to accommodate 907 persons, have been inspected both by day and night, at certain periods, and have been kept in a very cleanly and orderly condition.

One Lodging House Keeper was summoned for allowing more persons to occupy a room than was allowed by the bye-laws, and fined 5s.

No case of Infectious Disease occurred in any of the houses during the year.

Slaughter
Houses.

The Slaughter Houses, Bakehouses, &c., have been carefully looked after, but it was not found necessary to take any legal proceedings against any of the owners or occupiers for infringement of the bye-laws.

With reference to Slaughter Houses, it may be remembered that in my last report reference was made to the danger attending the driving of Cattle through crowded streets, and also to the demoralizing effect upon the people, produced by the open manner in which the slaughtering of animals is carried out in many of the butchers' shops in the Borough.

No one, passing through some of our principal thoroughfares on a Wednesday or Thursday, can help being shocked at seeing groups of men, and even women and children, gratifying a morbid curiosity in seeing some poor animal openly put to death.

There are few towns now of any importance in which Public Abattoirs or Slaughter Houses have not been erected, either by the Local Authority or by private enterprise.

In Liverpool, the principal Abattoir was built by private individuals, and the shareholders receive a dividend of $12\frac{1}{2}$ per cent. In Manchester, Bradford, Edinburgh, and other places, even when the outlay has been large, a good dividend has been realized.

It is to be hoped that ere long an Abattoir will be erected in our own town on the North side of the River. The advantage arising from having such an institution will greatly outweigh any little inconvenience to which the Butchers may be put in conveying the meat from thence to their own shops.

The question of providing a Public Abattoir has not as yet been formally before the Council. The advisability of something being done, with reference to Slaughter Houses, has been brought by me under the consideration of the Health Committee, but so far they have not deemed it necessary to interfere with the present system.

There can be no doubt that if the Corporation built a Public Slaughter House similar to those in the Towns mentioned, but that financially it would prove a success, while it would have the effect of causing the Butchers' shops and premises to be more cleanly and wholesome; of preventing, to a large extent, the ill-treatment of animals; and last, though not least, of abolishing that open manner of slaughtering, which under the present system is an outrage on public decency.

Under the provisions of the 90th section of the Public Health Act, the Local Government Board may empower Local Authorities to make Bye-Laws for the Registration of Houses let in lodgings, and occupied by members of more than one family.

Registration of
Tenemented
Houses.

The advantages to be derived from the adoption of such a system of Registration are as follows :—

- 1.—The prevention of overcrowding—one of the most fruitful sources of the origin and spread of Typhus Fever and other infectious diseases.
- 2.—The systematic inspection of such houses, and the enforcing therein the application of such means as may be necessary to keep such houses in a good sanitary condition, especially in regard to cleanliness and ventilation.
- 3.—That it provides for the cleansing and limewashing, at stated times, of the premises, and for the paving of the courts and courtyards thereof.
- 4.—That it provides for the giving of notices by the occupants of such houses to the Medical Officer of Health of the occurrence of any infectious or contagious disease therein.

An attempt was made by me some months ago to carry out this system of Registration, but in consequence of the large amount of work devolving upon the two Inspectors in looking after the nuisances arising from Ash-pits alone, it was obliged to be abandoned for a time. Now, however, that the Inspectors will be relieved from this work by the adoption of the cleansing scheme, it is my intention to proceed with the Registration of Tenemented Houses—the Health Committee having given me authority to do so.

I am quite satisfied that the carrying out of such a system, while being an advantage to the owners, will add much to the comfort and improve the health of the occupants of such houses, and as a consequence be a source of much public good by improving generally the Sanitary condition of the Borough.

ADULTER-
ATION OF
FOOD ACT.

During the year, the following 35 articles of Food and Drink were forwarded to me for analysis, viz., 14 samples of Milk, 3 of Butter, 2 of Meat, 6 of Whiskey, 3 of Rum, 2 of Champagne, 1 of Brandy, 1 of Gin, and 1 of Ginger Beer.

Of the 14 samples of Milk, 2 were found adulterated; the sellers were summoned before the Magistrates, and each fined 20s. and costs.

Of the 3 samples of Butter, one was found unfit for food, but the purchaser declined to prosecute.

The Spirits and Wine analysed were found free from adulteration, but varied in strength from $7\frac{1}{2}$ to 33 under proof.

The samples of Bread and Meat were suspected of containing some poisonous material, but none whatever was found.

The Ginger Beer was found to contain a poisonous quantity of the Acetate of Lead. This had evidently been intentionally put into the liquid.

In addition to the above named, a sample of Green Wall-paper and several Pocket Handkerchiefs, suspected of containing some poisonous substances, were forwarded to me for examination. The former was found to contain a large quantity of Arsenic, and the powdering substance upon the latter proved to be Starch.

In concluding this Report, the Medical Officer desires to acknowledge, with thanks, the assistance rendered by the Medical Profession, especially by Dr. Evans, Dr. Blumer, and Mr. H. H. Taylor, F.R.C.S. ; S. S. Hodgson, Esq., Clerk to the Guardians ; the Relieving Officers, School Board Officers, and others in supplying him with information of the outbreak of Infectious Diseases in the Borough, and of other matters affecting the Public Health. He also desires to speak in terms of commendation of the manner in which Inspectors McKay and Dixon, Mr. Clement Thompson, the Clerk, Superintendent Wilkinson, and Messrs. Tinmouth, Painter, and Thurlbeck, Foremen of the Districts, have discharged the duties of their respective offices.

APPENDIX.

II. BIRTHS.

TABLE OF BIRTHS,

Registered in the Borough, from January 1st to December 30th, 1876.

DISTRICTS.	First Quarter.		Second Quarter.		Third Quarter.		Fourth Quarter.		Total.		Total.	Rate per 1,000.
	M	F	M	F	M	F	M	F	M	F		
Sunderland	87	88	74	82	76	72	83	76	320	318	638	34·5
South Bishopwearmouth	224	158	184	179	173	172	190	148	771	657	1428	43·6
North Bishopwearmouth	203	179	158	151	169	136	134	146	664	612	1276	42·9
Monkwearmouth	120	142	134	125	138	127	140	141	532	535	1067	38·8
	634	567	550	537	556	507	547	511	2287	2122	4409	
Totals	1201		1087		1063		1058		4409		4409	40·6
Rate per 1,000	11·0		10·0		9·8		9·7		40·6			

III. DEATHS.

TABLE OF DEATHS,

Registered in the Borough for the Year ending December 30th, 1876.

DISTRICTS.	Population.	First Quarter.		Second Quarter.		Third Quarter.		Fourth Quarter.		Totals.		Total.	Rate per 1,000.
		M	F	M	F	M	F	M	F	M	F		
Sunderland	18,492	42	46	38	52	59	61	60	40	199	199	398	21·5
South Bishopwearmouth	32,700	83	82	74	71	83	80	80	83	320	316	636	19·4
North Bishopwearmouth	29,700	110	63	82	85	106	88	87	81	385	317	702	23·6
Monkwearmouth	27,450	47	49	64	45	63	65	100	93	274	252	526	19·1
		282	240	258	253	311	294	327	297	1178	1084	2262	20·8
Totals	108,342	522		511		605		624		2262		2262	20·8
Rate per 1,000		4·8		4·7		5·5		5·7		20·8			

IV.

Occupation of Persons, 20 Years of Age and
upwards, who Died from the Diseases
mentioned during the Year.

(Given as accurately as the Returns allowed.)

Occupation.	Heart Disease.	Phthisis.	Disease of Lungs.	Apoplexy.	Paralysis.	Cancer.	Total.
Agents .....	...	...	1	1	...	..	2
Blockmakers	1	1	...	...	...	...	2
Butchers	2	...	...	1	1	...	4
Bone Setter	1	...	...	...	...	...	1
Builder .....	...	1	...	...	...	...	1
Coal Miners.....	1	3	..	...	1	...	5
Clerks	1	3	...	...	...	...	4
Cartmen	3	3	...	...	...	...	6
Constable .....	...	...	...	...	1	...	1
Customs' Officer	1	...	...	...	...	...	1
Cabman .....	...	1	...	...	...	...	1
Drapers .....	...	2	...	...	..	...	2
Engineers.....	..	1	...	...	1	...	2
Farmers .....	...	1	..	3	...	...	4
Farm Servant	1	...	...	...	...	...	1
Fireman .....	...	1	...	...	...	...	1
Gardeners.....	...	...	...	...	2	...	2
Glass Makers .....	...	1	...	...	1	...	2
Groom	1	...	...	...	...	...	1
Hatter	1	...	...	...	...	...	1
Horse Keepers.....	...	2	...	...	...	...	2
House Owner	1	..	...	...	...	...	1
Iron Founder .....	...	1	...	...	...	...	1
Joiners	1	6	1	1	2	...	11
Jeweller .....	...	...	...	...	1	...	1
Licensed Victuallers ...	4	1	...	1	...	...	6
Labourers.....	6	20	...	...	5	1	32
Millers .....	...	...	...	1	...	1	2
Moulder .....	...	...	...	...	1	...	1
Masons.....	1	1	...	1	2	1	6
Pilot.....	...	...	...	1	...	..	1
Printer. ....	...	...	1	...	...	...	1
Pipe Maker .....	...	...	...	...	1	...	1
Painter... ..	1	...	...	...	1	...	2
Carried forward	27	49	3	10	20	3	112

Occupation of Persons.—Continued.

Occupation.	Heart Disease.	Phthisis.	Disease of Lungs.	Apoplexy.	Paralysis.	Cancer.	Total.
Brought forward ...	27	49	3	10	20	3	112
Rigger	1	...	...	...	...	...	1
Seamen	4	4	...	3	6	1	18
Shipwrights	3	8	...	2	3	...	16
Smiths	1	3	2	...	1	1	8
Sawyers	1	...	...	...	...	1	2
Shipowners	1	1	...	...	1	...	3
Soldiers .....	...	2	...	...	...	...	2
Shoemakers	2	2	...	...	1	1	6
Tailors	2	5	...	...	...	...	7
Tallow Chandler .....	...	...	1	...	...	...	1
Tobacconist .....	...	1	...	...	...	...	1
Teacher .....	...	1	...	...	...	...	1
Watermen .....	...	1	...	...	2	1	4
Upholsterer .....	...	1	...	...	...	...	1
Sundry Trades.....	6	11	1	3	2	1	24
Total	48	89	7	18	36	9	207
Females	54	76	22	20	25	21	218
Grand Totals.....	102	165	29	38	61	30	425

VI.

LIST OF STREETS

*Wherein ZYMOTIC DISEASES occurred in the Year 1876,
given as accurately as the returns allowed.*

SUNDERLAND DISTRICT.

Name of Street.	Fever.	Scarlatina	Measles.	Diphtheria.	Whooping Cough.	Diarrhoea.	Removed to Hospital.	Deaths.
Bank street	2	2	2	..	..	2	1	3
Bank row .. ..	..	..	1	..	..	..	..	..
Burleigh street	1	6	4	..	..	5	..	9
Barrack street .. ..	..	1	2	..	..	..	..	..
Church street and open	2	..	..	..	..	2	1	2
Covent Garden street ..	1	4	..	..	..	..	..	2
Drysdale's entry .. ..	..	2	1	..	..	..	..	..
Fitters' row	1	..	..	..	..	..	1	..
Fighting Cock lane ..	1	..	..	..	..	..	1	..
Flag lane .. ..	..	1	4	..	..	..	..	1
George street	3	4	8	..	..	2	2	4
Golden alley	1	..	3	..	..	1	1	1
Grey street .. ..	..	..	6	..	..	..	..	..
High street East .. ..	..	1	..	..	1	1	..	3
Hartley street .. ..	..	..	5	..	..	..	..	..
Horn's lane .. ..	..	..	14	..	..	..	..	..
Lombard street .. ..	..	..	3	..	..	1	..	1
Low quay .. ..	..	..	..	..	..	2	..	2
Low street	1	..	..	..	..	..	1	1
Maude's lane .. ..	..	..	4	..	..	..	..	..
Minorca	1	1	8	..	..	1	..	3
Moorgate street	6	1	2	..	..	1	..	4
Maling's rigg	3	..	..	..	..	2	..	2
Market open	1	..	..	..	..	..	..	..
Moor	1	6	..	..	..	..	..	2
Mill street .. ..	..	..	..	..	..	1	..	1
Nesham square	1	..	..	..	..	1	..	2
New Grey street .. ..	..	..	2	..	..	1	..	1
Northumberland place ..	..	2	6	..	..	1	..	2
Pottery bank .. ..	..	..	..	..	..	1	..	1
Queen street .. ..	..	..	2	..	..	..	..	..
Stafford street .. ..	..	..	4	..	..	..	..	..
Silver street .. ..	..	1	4	..	..	1	..	1
Spring Garden lane	3	..	6	..	..	1	..	2
Thomas street	2	..	..	..	..	1	1	2
Trinity place .. ..	..	..	..	..	..	1	..	1
Union lane	1	..	..	..	..	..	1	..
Vine street and open ..	2	2	5	..	2	1	..	4
Walton place .. ..	..	..	8	..	..	1	..	2
Warren street .. ..	..	..	4	..	..	1	..	1
Total	34	34	108	..	3	32	10	60

VII.
BISHOPWEARMOUTH DISTRICT.

Name of Street.	Fever.	Scarlatina.	Measles.	Diphtheria.	Whooping Cough.	Diarrhoea.	Removed to Hospital.	Deaths.
Avon street	2	..	..	..	..	..	..	..
Aylmer street ..	4	..	2	..	2	..	..	4
Addison street ..	..	2	1	..	..	..	..	1
Alfred street ..	..	..	1	..	..	..	..	1
Aylesbury street ..	..	3	..	..	..	..	..	..
Alderson street ..	..	4	..	..	..	..	..	2
Amberley street ..	..	1	..	..	..	..	..	1
Albany terrace ..	..	1	..	..	..	..	..	1
Albert street ..	..	..	..	..	..	2	..	2
Brougham street ..	1	..	3	..	..	..	..	2
Bell street ..	..	4	..	1	..	..	..	1
Borough road ..	..	4	3	..	..	1	..	3
Barlow court ..	1	..	..	..	..	..	1	..
Bedford street ..	..	..	1	..	..	1	..	2
Bridge street ..	..	1	..	..	..	..	..	..
Booth street ..	..	..	..	..	..	1	..	1
Blandford street ..	..	..	..	..	..	1	..	1
Castle street ..	2	..	..	..	..	..	1	..
Clazey's cottages ..	..	..	3	..	..	..	..	..
Christopher street ..	1	..	..	..	..	1	..	2
Clanny street ..	1	..	..	..	..	..	..	1
Cross Green street ..	1	..	2	..	..	..	1	..
Church street ..	..	..	2	..	1	..	..	2
Clyde street ..	..	..	5	..	..	..	..	..
Cirencester street ..	..	..	3	..	..	1	..	2
Cumberland street ..	..	..	1	..	..	1	..	2
Commercial road ..	..	1	..	..	..	..	..	1
Catherine street ..	..	2	..	..	..	..	..	1
Cliff terrace ..	..	2	..	..	..	..	..	1
Catherine street, Deptford..	..	1	..	..	..	..	..	1
Cousin street ..	..	..	..	..	..	2	..	2
Coronation street ..	..	..	..	..	..	1	..	1
Crowtree road ..	..	..	..	..	..	1	..	1
Collier row ..	..	..	..	..	..	1	..	1
Cromwell street ..	..	..	..	..	3	..	..	1
Deptford road ..	2	..	..	..	2	..	..	1
D'Arcy street ..	1	..	..	..	..	..	..	..
D'Arcy terrace ..	..	..	4	..	1	..	..	2
Dock street ..	..	..	2	..	..	..	..	..
Durham road ..	..	1	..	..	..	..	1	..
Dunning street..	..	1	..	..	..	..	..	1
East street ..	..	..	..	..	3	..	..	1
Emma street ..	..	1	..	..	..	1	..	2
Fleet street ..	..	..	2	..	..	..	..	..
Frederick street, Pallion ..	..	..	2	..	..	..	..	..
Farrington row ..	2	..	1	..	..	2	..	2
Fowler terrace ..	..	1	..	..	..	..	..	1
Frederick street ..	..	1	..	..	..	..	..	1
Carried forward ..	18	31	38	1	12	17	4	52

VIII.
BISHOPWEARMOUTH DISTRICT.—Contd.

Name of Street.		Fever.	Scarlatina.	Measles.	Diphtheria.	Whooping Cough.	Diarrhoea.	Removed to Hospital.	Deaths.
Brought forward	..	18	31	38	1	12	17	4	52
Granville street..	..	..	..	..	..	..	1	..	1
George street	..	..	..	..	..	2	..	..	1
Grace street	..	..	..	..	..	..	2	..	1
Gibson terrace	..	..	..	..	..	..	1	..	1
Green	..	..	..	..	..	..	1	..	1
Glebe street	..	..	2	..	..	..	..	..	1
Gilsland street	..	..	3	..	..	..	..	..	1
Grafton street	..	..	3	..	..	..	..	..	1
Garden street	..	..	..	2	..	..	1	..	1
Henry street	..	..	1	..	..	..	2	..	3
Henry street East	..	1	1	..	..	..	1	..	3
Hind street	..	1	..	..	..	..	..	..	..
Hendon road	..	..	1	..	2	..	1	..	3
Harold street	..	..	..	..	1	..	..	..	1
Hedley street	..	5	5	..	..	1	..	1	6
Hendon street	..	4	..	..	..	..	..	..	1
Hillfield terrace..	..	4	..	..	..	..	..	3	1
Harley street	..	1	..	..	..	..	..	..	1
Hort street	..	5	..	..	..	..	1	1	2
Hopper street	..	1	..	..	..	..	1	..	1
Hope street	..	1	..	..	..	..	1	..	2
Holmeside	..	..	3	..	..	..	..	1	..
Hylton road West	..	..	4	..	..	..	..	..	2
High street West	..	..	1	..	..	..	2	..	2
Harper terrace	..	..	..	..	..	..	1	..	1
Hudson road	..	..	..	..	..	..	1	..	1
Herrington street	..	..	..	..	..	..	1	..	1
Harrogate street	..	..	..	..	..	..	1	..	1
Howarth street..	..	..	..	..	..	2	..	..	1
Jobling street	..	..	..	..	..	..	1	..	1
Johnson street	..	..	3	4	..	..	..	..	4
King street	..	..	..	..	..	..	..	..	1
Kendal street	..	1	..	..	..	..	1	..	1
Lodge terrace	..	2	..	..	..	..	3	..	3
Lime street	..	..	2	..	..	..	..	..	1
Lawton street	..	..	2	..	..	3	1	..	2
Matlock street	..	1	..	1	..	..	..	1	..
Meaburn street	..	..	..	2	..	..	..	..	1
Milburn street	..	1	2	..	..	..	..	..	3
Moor street	..	..	3	2	..	..	..	..	2
Milbank row	..	..	20	..	..	..	..	..	1
Middle street	..	..	1	..	..	..	..	..	1
Mabel terrace	..	..	2	..	..	..	..	..	1
McNay's buildings	..	..	1	..	..	..	..	..	1
Murton street	..	..	..	..	..	..	1	..	1
Mainsforth terrace	..	..	..	..	..	4	..	..	1
Carried forward	..	46	91	49	4	24	43	11	119

IX.
BISHOPWEARMOUTH DISTRICT.—Contd.

Name of Street.	Fever.	Scarlatina.	Measles.	Diphtheria.	Whooping Cough.	Diarrhoea.	Removed to Hospital.	Deaths.
Brought forward ..	46	91	49	4	24	43	11	119
Northumberland street	2	1	..	..	1	..	3
Nicholson street ..	1	..	3	..	..	2	..	3
Norman street	2	3	5	..	..	1	1
Norfolk street	3	..	..	..	..	1
Nile street	4	..	..	..	..	1
North Durham street	1	..	1
North Milburn street	1	..	1
Numbers garth..	2	..	2
Parade	1	..	..	1
Peel street	2	..	..	1
Priestly's crescent	3	..	..	1
Picton street	3	3	..	1	..	3
Panns	1	..	..	2	..	..	2
Page street	1	..	..	..	1
Potts street	1	..	..	..	..	..	..
Queen street	2	4	..	..	..	..	2
Railway street	2	..	1	..	3
Rutland street	2	..	..	..	..	..	2
Randolph street	1	..	..	..	..	..	1
Railway row	4	..	..	..	1
Royalty	1	..	..	..	..	1
Robinson street..	2	..	..	1	..	2
Robinson terrace	1	..	..	..	..	1
Ropery road	1	..	1
Ravensworth street	2	..	..	..	..	1
St. Vincent street	2	..	..	1
Seabank place	1	..	1
St. Cuthbert's terrace :	1	..	1
Simpson street	1	..	..	..	..	..
Salem street	3	..	..	..	..	1
Southgate..	1	..	..	..	..
Sussex street	4	..	..	..	..
St. Bede's terrace	1	..	..	..	..	..	1
South Durham street	2	..	..	..	..	..	..
South Johnson street	2	..	..	..	..	..	1
Sans street	1	7	..	1	1	2
Tweed street	1	..	..	..	1
Trimdon street	1	..	..	..	1
Thompson street	1	..	..	..	..	1
Tyne street	2	..	1
Tower street West	1	..	1
Thornhill	1	..	..	..	..	1	..
William street	1	..	..	..	..	1
Woodbine street	1	6	..	4	1	4
Woodbine street East	1	3	..	..	..	..	2
Woodbine terrace, Pallion	2	..	..	..	1
Carried forward ..	64	126	90	4	38	61	14	177

X.

BISHOPWEARMOUTH DISTRICT.—Contd.

Name of Street.		Fever.	Scarlatina.	Measles.	Dsphtheria.	Whooping Cough.	Diarrhoea.	Removed to Hospital.	Deaths.
Brought forward	..	64	126	90	4	38	61	14	177
Winchester terrace	..	..	..	5	..	..	..	..	..
Walker street	..	1	..	..	..	..	..	..	1
West street	..	1	..	..	..	..	..	..	..
Wear street	..	3	1	..	..	..	1	..	2
Westbury street	..	1	6	..	..	..	..	..	1
Watson's lane	..	..	1	..	..	..	..	..	1
Wood street	..	..	2	..	..	..	..	..	2
Wellington road	..	..	1	..	..	..	..	..	1
Williams street..	..	..	1	..	..	..	1	..	2
Wall street	..	..	..	..	..	..	1	..	1
West Sunnyside..	..	..	..	..	..	..	1	..	1
West Wear street	..	..	..	..	..	..	1	..	1
Washington street	..	..	..	..	..	..	1	..	1
Waterworks road	..	..	..	..	..	2	..	..	1
Zion street	..	..	..	..	..	..	1	..	1
Total	..	70	138	95	4	40	68	14	193

XI.
MONKWEARMOUTH DISTRICT.

Name of Street.	Fever.	Scarlatina.	Measles.	Diphtheria.	Whooping Cough.	Diarrhoea.	Removed to Hospital.	Deaths.
Abbs street .. ..	..	..	..	6	..	..	..	1
Albany street .. ..	..	1	..	..	..	1	..	2
Barclay street .. ..	..	..	..	..	2	..	..	1
Brooke street .. ..	..	6	..	..	..	1	4	3
Brandling street ..	..	2	..	..	4	1	..	4
Blue Bell yard .. ..	..	..	2	..	..	1	..	1
Back stables .. ..	..	..	2	..	3	..	..	1
Bonner's field .. ..	..	..	1	..	1	..	..	2
Bond street	1	5	..	..	..	2	..	3
Bloomfield street ..	1	..	..	..	..	..	..	1
Church street	4	..	1	..	6	3	1	7
Causeway .. ..	..	2	..	..	1	..	..	3
Colliery square .. ..	..	4	..	..	..	2	..	1
Calver street .. ..	..	..	..	..	1	..	..	1
Charles street .. ..	..	..	..	..	1	..	..	1
Dundas street .. ..	..	..	..	..	..	1	..	1
Dixon's square .. ..	..	2	..	..	2	..	..	1
Dove's open .. ..	..	1	..	..	..	..	..	..
Dame Dorothy street	..	1	..	..	4	1	..	4
Dock street	1	..	1	..	..	..	..	..
Devonshire street..	..	5	2	..	13	..	..	1
Eglinton street .. ..	..	4	..	..	..	..	..	1
Ellerslie terrace ..	..	..	..	..	..	1	..	1
Edmundson street ..	..	..	..	..	..	1	..	1
Fulwell lane	1	..	..	..	..	..	..	..
George street .. ..	..	3	..	..	..	1	..	2
Gosforth street	1	1	..	..	..	1	..	1
Hardwicke street ..	3	7	..	..	..	..	..	2
Howick street	4	..	..	..	3	..	..	3
Huddleston street ..	5	..	..	..	3	..	..	1
Hodgson's buildings	..	..	..	2	..	..	..	1
Hood street .. ..	..	6	..	1	..	..	..	6
Hedworth street ..	..	..	5	..	..	1	..	1
Hallgarth square ..	..	1	..	..	..	..	..	1
Howick place .. ..	..	..	..	..	3	..	..	1
Look-out hill .. ..	..	1	..	..	..	..	..	1
Long row .. ..	..	11	..	..	..	..	..	3
Liddell street .. ..	..	2	..	..	..	..	..	1
Liddell terrace .. ..	..	2	..	..	..	..	..	1
Millum terrace .. ..	..	1	..	..	..	1	..	1
Millum place .. ..	..	3	..	..	..	..	..	2
Mulgrave street .. ..	..	1	..	..	4	..	..	2
North Bridge street	..	7	7	..	..	..	..	3
Nelson square .. ..	..	..	..	..	2	..	..	1
Pilgrim street	2	11	..	..	1	..	..	4
Portobello lane .. ..	..	6	5	..	..	1	1	4
Roker avenue .. ..	..	5	..	..	..	..	..	..
Roker terrace .. ..	..	..	..	..	..	2	..	2
Carried forward.....	24	100	26	9	54	22	6	86

XII.
MONKWEARMOUTH DISTRICT.—Contd.

Name of Street.	Fever.	Scarlatina.	Measles.	Diphtheria.	Whooping Cough.	Diarrhœa.	Removed to Hospital.	Deaths.
Brought forward ..	24	100	26	9	54	22	6	86
Ropery row ..	..	2	..	..	..	..	..	1
Rothsay street ..	..	..	..	..	1	..	..	1
Society lane ..	..	..	3	..	3	..	..	3
Stobart street ..	..	1	..	..	..	1	..	2
Southwick lane ..	..	1	..	..	..	..	..	1
Smithson's square ..	..	4	..	..	..	..	..	1
Sheepfolds ..	..	..	..	..	..	1	..	1
Trafalgar court ..	..	..	..	..	2	..	..	1
Topliff row ..	..	..	..	..	..	1	..	1
Thomas street ..	1	2	..	..	..	..	..	2
Victor street ..	3	3	..	1	1	..	..	4
Wilson street ..	..	2	3	..	..	..	..	3
Wayman street ..	1	12	..	1	..	1	..	5
Whitburn street ..	3	1	..	..	2	2	..	3
Whickham street ..	..	..	2	..	..	..	..	1
Wreath Quay road ..	..	4	..	..	..	1	..	4
Waterloo street ..	1	..	..	..	1	1	..	3
Williamson street ..	..	..	..	..	6	..	..	3
Yorke street ..	..	..	..	..	2	..	..	1
Zetland street ..	..	4	..	..	..	..	..	1
Total ..	33	136	34	11	72	30	6	128
Sunderland District ..	34	34	108	..	3	32	10	60
Bishopwearmouth District	70	138	95	4	40	68	14	193
Monkwearmouth ..	33	136	34	11	72	30	6	128
Grand Totals ..	137	408	237	15	115	130	30	381

*DEATHS from ZYMOTIC DISEASES during the
Six Years ending Dec. 31st, 1876.*

Years.	Deaths.	Percentage of TotalDeaths	Rate per 1,000 of wholeBorough.	Population of wholeBorough.
1871	1552	43·0	15·5	100,000
1872	543	20·0	5·3	101,000
1873	337	14·3	3·2	103,000
1874	460	18·8	4·4	103,000
1875	390	16·3	3·6	106,300
1876	431	19·0	3·9	108,342

DEATHS FROM ZYMOTIC DISEASES.

	Sunderland. Population, 18,492.				South Bp. wearmouth. Population, 32,700.				North Bp. wearmouth. Population, 29,700.				Monkwearmouth. Population, 27,450.				Whole Borough, 108,342.	
	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals.	Rate per 1,000.
Smallpox .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..17
Typhus .....	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	19	..31
Typhoid .....	..	1	1	1	..	..	1	4	..	3	1	3	..	1	2	7	34	..31
Scarlatina	2	..	3	11	13	2	4	10	10	6	18	10	6	3	5	37	133	1..22
Measles	2	3	1	..	5	6	2	..	3	8	3	..	2	4	0	0	42	..38
Whooping Cough .....	..	1	..	..	2	2	1	4	1	4	2	3	1	..	2	30	53	..48
Diphtheria .....	..	..	..	..	1	1	..	..	..	..	1	1	1	1	2	2	9	..08
Diarrhoea .....	..	2	29	2	1	1	33	5	3	1	24	9	1	..	23	7	141	1..30
	4	10	35	17	24	12	41	24	15	23	53	29	14	10	37	83	431	
Totals .....	.66				101				120				144				3.9	
Rate per 1,000	3.5				3.0				4.0				5.3				3.9	

COMPARATIVE MORTALITY OF LARGE TOWNS.

BOROUGH, &c.	Annual Rate of Mortality per 1,000 living at all Ages.			Deaths under 1 Year, to 1000 Births Registered	Annual Rate of Mortality per 1,000 living.		Percentage, to Total Deaths, of Deaths.	
	All Causes.	Seven principal Zymotic Diseases.	Violence.		Aged 1 to 60 Years.	Aged 60 Years and upwards.		
In 20 Towns	23·5	4·0	0·85	167	13·9	76·3	6·1	14·4
London.....	22·1	3·6	0·83	157	13·3	71·8	6·8	18·0
Brighton	19·5	2·2	0·60	154	11·1	65·1	4·5	12·6
Portsmouth	22·0	6·4	0·46	143	14·8	66·8	4·3	8·8
Norwich	21·8	2·9	0·53	178	10·6	69·4	6·3	8·6
Plymouth.....	22·0	3·0	0·56	156	12·2	78·3	5·2	8·2
Bristol	22·5	3·7	0·80	153	13·1	71·9	5·7	11·6
Wolverhampton	23·7	3·9	0·95	176	13·4	83·1	6·7	15·6
Birmingham	22·6	3·5	1·04	160	13·0	77·9	7·5	11·6
Leicester	23·0	4·9	0·68	202	11·8	63·1	6·9	10·2
Nottingham.....	23·4	3·5	0·80	173	13·0	72·6	7·0	11·0
Liverpool	27·5	5·6	1·32	207	15·0	115·3	5·4	14·7
Manchester	29·0	5·2	0·95	180	19·2	87·2	8·0	15·9
Salford	31·8	8·5	0·82	189	20·0	84·8	4·2	10·0
Oldham	29·2	4·1	0·92	175	18·8	87·0	3·7	5·9
Bradford	23·8	3·7	0·65	174	14·5	75·3	4·1	7·1
Leeds	25·0	4·5	0·66	181	14·9	76·1	4·6	7·4
Sheffield	24·2	4·7	0·47	169	14·6	84·6	2·6	9·0
Hull	22·8	3·5	1·02	163	12·8	72·1	4·9	8·6
SUNDERLAND	20·8	3·9	0·73	153	12·1	65·6	4·7	7·2
Newcastle-on-Tyne	22·7	2·5	1·11	167	13·0	73·7	5·8	11·1

XV.

RETURN of Cases of Sickness and Deaths among Paupers belonging to the District, and among other persons belonging to the District who have been in or out patients of any Hospital or Dispensary, or other Public Medical Institution, within the District.

FIRST QUARTER.					SECOND QUARTER.				
Name of Diseases.	Sickness.		Deaths.		Name of Diseases.	Sickness.		Deaths.	
	Aged under 5.	Aged 5 and upwards.	Aged under 5.	Aged 5 and upwards.		Aged under 5.	Aged 5 and upwards.	Aged under 5.	Aged 5 and upwards.
All Diseases and Injuries	I. 177	II. 1631	III. 21	IV. 89	All Diseases and Injuries	I. 153	II. 1360	III. 17	IV. 60
Smallpox .....	..	..	..	..	Smallpox .....	..	..	..	..
Measles	16	12	1	..	Measles	17	7	3	..
Scarlatina	8	13	2	2	Scarlatina	8	6	3	1
Diphtheria.....	..	..	..	..	Diphtheria.....	..	..	..	..
Whooping Cough ..	3	1	..	..	Whooping Cough....	5	3	..	..
Continued Fevers—					Continued Fevers—				
Typhus.....	..	13	..	..	Typhus .....	..	3	..	2
Enteric	2	6	..	1	Enteric	1	3	1	..
Of other or doubtful sorts	2	8	..	..	Of other or doubtful sorts	2	3	..	..
Diarrhoea & Dysentery	9	18	1	..	Diarrhoea & Dysentery	8	19	..	..
Cholera—English....	..	..	..	..	Cholera—English....	2	5	..	..
Rheumatic Fever ....	..	21	..	..	Rheumatic Fever ....	..	18	..	..
Erysipelas	1	6	..	..	Erysipelas .....	..	12	..	..
Pyæmia .....	..	2	..	2	Pyæmia .....	..	1	..	1
Puerperal Fever ....	..	..	..	..	Puerperal Fever ....	..	..	..	..
Ague .....	..	1	..	..	Ague .....	..	..	..	..
Phthisis .....	..	53	..	27	Phthisis	1	62	..	16
Bronchitis, Pneumonia and Pleurisy	14	207	5	18	Bronchitis, Pneumonia and Pleurisy	24	89	4	11
Heart Disease .....	..	32	..	7	Heart Disease .....	..	28	..	7
Injuries	14	182	..	7	Injuries	18	192	..	3

XVI.

RETURN OF SICKNESS AND DEATHS

During the Third Quarter, ending September 30th, 1876, and Fourth Quarter, ending December 31st, 1876.

THIRD QUARTER.					FOURTH QUARTER.				
Name of Diseases.	Sickness.		Deaths.		Name of Diseases.	Sickness.		Deaths.	
	Aged under 5.	Aged 5 and upwards.	Aged under 5.	Aged 5 and upwards.		Aged under 5.	Aged 5 and upwards.	Aged under 5.	Aged 5 and upwards.
All Diseases and Injuries	I.	II.	III.	IV.	All Diseases and Injuries	I.	II.	III.	IV.
	464	964	30	58		475	1594	29	55
Smallpox .....	..	..	..	..	Smallpox .....	..	..	..	..
Measles	12	2	..	..	Measles .....	..	..	..	..
Scarlatina	1	11	1	1	Scarlatina	20	25	9	4
Diphtheria .....	..	..	..	..	Diphtheria	1	..	..	..
Whooping Cough....	10	5	1	..	Whooping Cough....	52	7	1	..
Continued Fevers—					Continued Fevers—				
Typhus .....	..	5	..	1	Typhus	1	12	..	3
Enteric	1	6	..	1	Enteric	1	10	..	1
Of other or doubtful sorts	5	17	..	..	Of other or doubtful sorts	11	24	..	..
Diarrhœa & Dysentery	192	59	8	6	Diarrhœa & Dysentery	49	26	1	2
Cholera—English....	3	23	..	..	Cholera—English....	..	..	..	..
Rheumatic Fever ....	..	11	..	..	Rheumatic Fever ....	..	18	..	..
Erysipelas	1	6	..	1	Erysipelas .....	..	8	..	..
Pyæmia .....	..	..	..	..	Pyæmia .....	..	..	..	..
Puerperal Fever ....	..	..	..	..	Puerperal Fever ....	..	..	..	..
Ague .....	..	1	..	..	Ague .....	..	..	..	..
Phthisis .....	..	44	..	19	Phthisis .....	..	73	..	12
Bronchitis, Pneumonia and Pleurisy	40	123	2	8	Bronchitis, Pneumonia and Pleurisy	131	178	..	5
Heart Disease .....	..	28	..	3	Heart Disease .....	..	45	..	3
Injuries	15	174	..	4	Injuries	11	189	..	3

XVII.

RETURN OF SICKNESS AND DEATHS

During the Year ending December 31st, 1876.

Name of Disease.	Sickness.		Deaths.	
	Aged under 5.	Aged 5 and upwards.	Aged under 5.	Aged 5 and upwards.
	I.	II.	III.	IV.
All Diseases and Injuries	1269	5549	97	262
Smallpox .....	..	1	..	..
Measles	65	46	13	4
Scarlatina	17	30	6	4
Diphtheria	1	..	..	..
Whooping Cough.....	70	16	2	..
Continued Fevers—				
Typhus	1	33	..	6
Enteric	5	25	1	3
Of other or doubtful sorts....	20	52	..	..
Diarrhæa and Dysentery	258	122	10	8
Cholera—English.....	5	28	..	..
Rheumatic Fever .....	..	68	..	..
Erysipelas	2	32	..	1
Pyæmia .....	..	3	..	3
Puerperal Fever .....	..	..	..	..
Ague .....	..	2	..	..
Phthisis	1	232	..	74
Bronchitis, Pnueumonia, and Pleurisy	209	597	11	42
Heart Disease .....	..	133	..	20
Injuries	58	737	..	17

XVIII.

TABLE OF METEOROLOGICAL OBSERVATIONS

From January to March, 1876.

JANUARY.						FEBRUARY.						MARCH.					
Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.
		Highest.	Lowest.					Highest.	Lowest.					Highest.	Lowest.		
1	30.0	47.0	39.0	W	.00	1	29.9	53.0	42.0	SW	.00	1	29.3	55.0	40.0	SW	.00
2	30.0	44.0	32.0	SW	.00	2	29.9	52.0	37.0	WSW	.09	2	29.5	54.0	37.0	SW	.00
3	29.9	48.0	35.0	WSW	.00	3	29.9	48.0	40.0	SW	.00	3	29.3	59.0	39.0	SW	.16
4	30.2	45.0	42.0	SE	.00	4	29.9	42.0	31.0	NW	.06	4	29.2	51.0	40.0	WSW	.01
5	30.2	40.0	37.0	SW	.00	5	30.0	41.0	32.0	NNW	.06	5	29.5	50.0	39.0	WNW	.00
6	30.3	37.0	34.0	SW	.01	6	30.4	45.0	38.0	NE	.09	6	29.2	51.0	40.0	NW	.14
7	30.3	36.0	33.5	ENE	.01	7	30.0	41.0	33.0	NE	.03	7	29.4	46.0	33.0	NW	.07
8	30.1	36.0	33.0	SE	.04	8	30.0	38.0	32.0	NNE	.10	8	29.3	48.0	35.0	SW	.05
9	30.2	37.0	25.0	NW	.04	9	29.8	39.0	33.0	NNE	.11	9	28.4	42.0	31.0	WNW	.18
10	30.4	38.0	27.0	NE	.00	10	29.9	37.0	28.0	NW	.01	10	28.3	49.0	33.0	WNW	.00
11	30.3	36.0	33.0	SE	.02	11	29.8	37.0	29.0	NW	.01	11	28.8	46.0	36.0	NW	.00
12	30.0	41.0	29.0	SW	.00	12	29.7	42.0	31.0	NE	.07	12	28.8	44.0	36.0	WNW	.08
13	30.3	40.0	31.0	NE	.21	13	29.7	38.0	28.0	SE	.01	13	29.4	48.0	29.0	W	.08
14	30.5	37.0	32.0	NW	.01	14	29.5	45.0	30.0	E	.02	14	29.1	53.0	36.0	WNW	.00
15	30.5	40.0	29.0	SW	.00	15	29.2	52.0	32.0	SSW	.26	15	28.8	50.0	35.0	WNW	.18
16	30.2	42.0	32.0	SSW	.00	16	29.3	49.0	38.0	SW	.02	16	29.3	47.0	31.0	NW	.04
17	30.2	42.0	36.0	SW	.00	17	29.4	52.0	39.0	WSW	.00	17	29.4	35.0	25.0	NW	.08
18	29.8	50.0	37.0	WSW	.00	18	29.1	54.0	42.0	SW	.12	18	29.9	45.0	28.0	NW	.01
19	29.8	49.0	39.0	SW	.00	19	29.0	49.0	41.0	WNW	.00	19	30.0	38.0	27.0	N	.38
20	29.5	49.0	43.0	SW	.00	20	29.6	43.0	34.0	NNW	.04	20	30.0	38.0	25.0	NNE	.01
21	29.8	40.0	35.0	NE	.01	21	29.5	52.0	34.0	S	.07	21	29.9	49.0	28.0	NW	.01
22	30.1	45.0	29.0	NW	.00	22	29.5	59.0	39.0	W	.00	22	30.0	48.0	32.0	NE	.01
23	30.2	52.0	33.0	SW	.00	23	29.3	49.0	42.0	NW	.01	23	29.7	50.0	33.0	NW	.01
24	30.1	52.0	42.0	WSW	.00	24	29.7	49.0	33.0	NW	.03	24	29.8	52.0	37.0	SSW	.01
25	30.3	47.0	40.0	SW	.00	25	29.3	49.0	32.0	SE	.00	25	29.8	50.0	38.0	SE	.01
26	30.1	48.0	33.0	SW	.00	26	29.3	52.0	34.0	WSW	.35	26	29.7	40.0	34.0	S	.01
27	30.2	48.0	39.0	SW	.00	27	29.2	49.0	37.0	SW	.07	27	29.5	40.0	33.0	SSE	.01
28	30.1	53.0	36.0	SW	.00	28	29.5	51.0	40.0	NW	.11	28	29.2	42.0	33.0	NE	.22
29	30.2	53.0	35.0	SW	.00	29	29.4	54.0	39.0	W	.28	29	29.2	47.0	36.0	NNE	.01
30	30.4	50.0	36.0	S	.00							30	29.3	54.0	36.0	SW	.41
31	30.2	54.0	37.0	SSW	.08							31	29.5	55.0	40.0	S	.01
Mean Height of Barometer in Month 30.14						Mean Height of Barometer in Month 29.50						Mean Height of Barometer in Month 29.37					
Adopted Mean Temperature 39.35.						Adopted Mean Temperature 41.00						Adopted Mean Temperature 40.7					
Rainfall 0.43.						Rainfall 2.02						Rainfall 2.20					

XIX.

TABLE OF METEOROLOGICAL OBSERVATIONS

From April to June, 1876.

APRIL.						MAY.						JUNE.					
Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.
		Highest.	Lowest.					Highest.	Lowest.					Highest.	Lowest.		
1	29.7	54.0	39.0	NW	.07	1	30.0	52.0	35.0	NNE	.04	1	30.1	68.0	46.0	NW	.00
2	30.0	58.0	38.0	NW	.00	2	30.1	53.0	35.0	NNE	.04	2	30.0	62.0	51.0	NW	.00
3	30.0	66.0	38.0	SW	.00	3	30.2	60.0	35.0	NNE	.00	3	29.6	63.0	51.0	SSW	.00
4	30.2	70.0	47.0	SW	.00	4	30.4	60.0	38.0	NNW	.00	4	29.6	63.0	44.0	W	.09
5	30.3	60.0	42.0	SW	.00	5	30.3	63.0	45.0	NW	.00	5	29.6	70.0	49.0	WNW	.02
6	30.4	62.0	49.0	NW	.00	6	30.2	69.0	49.0	NNE	.00	6	29.9	73.0	46.0	SW	.00
7	30.3	70.0	49.0	SW	.00	7	30.4	61.0	41.0	SE	.00	7	29.8	67.0	47.0	SW	.00
8	29.9	67.0	45.0	SSE	.00	8	30.4	60.0	40.0	SE	.00	8	29.8	59.0	47.0	SW	.00
9	29.5	60.0	45.0	W	.11	9	30.5	60.0	42.0	NE	.00	9	29.7	64.0	46.0	NE	.12
10	29.3	42.0	40.0	NNE	.08	10	30.4	51.0	35.0	NE	.00	10	30.1	68.0	43.0	NNE	.00
11	29.4	39.3	31.0	NNE	.73	11	30.3	54.0	36.0	NE	.00	11	30.1	71.0	45.0	NW	.00
12	29.7	44.0	30.0	NW	.03	12	30.2	62.0	38.0	E	.00	12	30.0	64.0	54.0	NNE	.00
13	29.7	46.0	29.0	NNE	.15	13	30.3	63.0	38.0	NNE	.00	13	29.9	67.0	49.0	WSW	.00
14	30.1	54.0	33.0	NE	.06	14	30.2	59.0	45.0	NE	.03	14	29.9	72.0	49.0	SSE	.02
15	30.3	53.0	26.0	SSE	.00	15	30.1	53.0	42.0	NE	.04	15	29.7	63.0	51.0	SW	.00
16	30.2	54.0	35.0	SE	.00	16	30.2	58.0	44.0	NNE	.00	16	29.7	66.0	49.0	NW	.01
17	29.6	45.0	38.0	ESE	.16	17	30.3	59.0	44.0	NE	.00	17	29.7	64.0	46.0	SW	.04
18	29.2	47.0	40.0	SE	.13	18	30.3	51.0	44.0	NE	.00	18	29.8	68.0	50.0	WNW	.12
19	28.9	52.0	40.0	SE	.13	19	30.3	58.0	44.0	SE	.00	19	30.0	72.0	48.0	SW	.00
20	29.0	57.0	41.0	SW	.09	20	30.2	65.0	42.0	NNE	.00	20	30.0	69.0	53.0	SW	.00
21	29.4	57.0	42.0	WSW	.37	21	30.0	60.0	47.0	NW	.00	21	30.0	66.0	52.0	SE	.00
22	29.8	44.0	38.0	NNE	.01	22	29.6	58.0	49.0	SW	.05	22	29.9	59.0	53.0	NNW	.86
23	30.0	46.0	36.0	SE	.04	23	29.5	59.0	45.0	W	.23	23	29.9	62.0	52.0	NNE	.46
24	29.9	56.0	38.0	SW	.03	24	30.7	53.0	45.0	NNE	.43	24	30.1	74.0	50.0	ESE	.00
25	29.8	60.0	36.0	WNW	.19	25	29.8	54.0	45.0	NNE	.12	25	30.1	74.0	51.0	NE	.00
26	29.9	61.0	42.0	NW	.01	26	29.6	55.0	43.0	NNW	.12	26	30.0	58.0	51.0	NNE	.00
27	29.9	60.0	41.0	SW	.00	27	29.8	61.0	49.0	NNE	.03	27	30.2	69.0	51.0	NE	.00
28	29.4	44.0	39.0	SSE	.32	28	30.0	70.0	49.0	NW	.01	28	30.0	68.0	51.0	NNE	.00
29	29.6	46.0	38.0	ENE	.65	29	30.0	71.0	49.0	WSW	.00	29	29.9	65.0	52.0	ESE	.00
30	29.8	53.0	36.0	NE	.04	30	29.9	65.0	51.0	SW	.00	30	29.8	63.0	53.0	SSE	.00
						31	30.0	66.0	47.0	NNW	.00						
Mean Height of Barometer in Month 30.10						Mean Height of Barometer in Month 30.10						Mean Height of Barometer in Month 29.89					
Adopted Mean Temperature 46.35						Adopted Mean Temperature 51.15						Adopted Mean Temperature 57.50					
Rainfall 3.40						Rainfall 1.14						Rainfall 1.74					

TABLE OF METEOROLOGICAL OBSERVATIONS

From July to September, 1876.

JULY.						AUGUST.						SEPTEMBER.					
Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.
		Highest.	Lowest.					Highest.	Lowest.					Highest.	Lowest.		
1	29.7	63.0	53.0	SW	.04	1	29.7	67.0	45.0	W	.43	1	29.5	61.0	50.0	NNW	.28
2	29.8	74.0	51.0	W	.19	2	29.9	62.0	48.0	SSW	.15	2	29.7	55.0	48.0	NNW	.19
3	30.0	68.0	51.0	SSW	.00	3	29.0	66.0	52.0	SW	.52	3	29.9	65.0	47.0	NE	.44
4	29.9	77.0	57.0	WNW	.00	4	29.7	72.0	53.0	WSW	.02	4	29.5	67.0	47.0	SSW	.27
5	29.6	78.0	55.0	SW	.02	5	29.9	75.0	50.0	NW	.00	5	29.3	71.0	53.0	SW	.27
6	29.9	80.0	51.0	SW	.00	6	30.1	69.0	55.0	SW	.00	6	29.3	68.0	52.0	SW	.06
7	29.6	69.0	55.0	NE	.28	7	29.9	70.0	58.0	WNW	.06	7	29.4	61.0	50.0	NNW	.00
8	29.6	73.0	56.0	SW	.00	8	30.0	79.0	59.0	SW	.00	8	29.5	62.0	45.0	NW	.12
9	29.7	71.0	57.0	WSW	.14	9	29.9	82.0	55.0	SW	.00	9	29.6	64.0	48.0	NNW	.00
10	29.7	70.0	52.0	NW	.00	10	30.2	80.0	53.0	NW	.00	10	29.7	60.0	49.0	NNW	.18
11	30.1	64.0	51.0	NE	.00	11	30.2	85.0	52.0	SW	.00	11	29.6	58.0	43.0	NW	.14
12	30.3	74.0	49.0	NW	.01	12	30.2	74.0	57.0	SSW	.00	12	29.7	54.0	43.0	NW	.00
13	30.3	88.0	60.0	WNW	.00	13	30.0	79.0	54.0	S	.00	13	29.7	57.0	47.0	NNW	.08
14	30.3	83.0	60.0	NW	.00	14	29.9	83.0	55.0	NE	.00	14	29.7	57.0	48.0	NNW	.01
15	30.4	82.0	59.0	NNE	.00	15	29.9	75.0	56.0	SE	.00	15	29.7	57.0	47.0	NNE	.04
16	30.3	90.0	59.0	SSW	.00	16	30.0	82.0	57.0	SSE	.00	16	29.7	65.0	48.0	SSE	.00
17	30.2	73.0	62.0	NE	.00	17	30.0	68.0	57.0	NNE	.00	17	29.6	66.0	50.0	SSW	.13
18	30.1	70.0	55.0	NW	.00	18	30.0	75.0	57.0	SE	.00	18	29.7	65.0	48.0	NW	.04
19	30.0	71.0	57.0	NE	.04	19	30.0	76.0	58.0	E	.00	19	30.1	65.0	45.0	NNW	.24
20	30.1	72.0	55.0	NE	.00	20	29.8	76.0	56.0	NE	.00	20	30.3	53.0	47.0	NNE	.04
21	30.1	74.0	56.0	NE	.00	21	29.8	73.0	58.0	NE	.00	21	30.1	63.0	50.0	SW	.01
22	29.9	78.0	56.0	SW	.00	22	29.7	71.0	58.0	NW	.00	22	29.9	68.0	51.0	SSE	.01
23	29.9	62.0	55.0	NE	.05	23	29.7	62.0	47.0	NW	.00	23	29.7	64.0	53.0	S	.01
24	30.1	71.0	52.0	NE	.52	24	29.7	64.0	45.0	NNW	.00	24	29.7	57.0	50.0	S	.21
25	30.1	72.0	55.0	SE	.00	25	29.9	63.0	42.0	NE	.00	25	29.4	57.0	53.0	NNW	.33
26	29.8	67.0	60.0	WNW	.09	26	29.8	64.0	49.0	WNW	.00	26	29.7	56.0	50.0	SE	.11
27	29.9	64.0	49.0	NE	.61	27	29.5	66.0	51.0	NNW	.03	27	29.6	56.0	51.0	NE	.33
28	29.8	66.0	49.0	SE	.24	28	29.8	63.0	48.9	SW	.00	28	29.4	56.0	49.0	NNE	.00
29	29.6	70.0	51.0	NW	.02	29	29.4	61.0	51.0	SE	.16	29	29.5	54.0	49.0	NE	.00
30	29.8	76.0	57.0	SW	.00	30	29.5	65.0	49.0	WSW	.12	30	29.7	53.0	46.0	ESE	.00
31	29.5	65.0	56.0	SW	.00	31	28.9	65.0	46.0	NW	.36						
Mean Height of Barometer in Month 29.94						Mean Height of Barometer in Month 29.80						Mean Height of Barometer in Month 29.66					
Adopted Mean Temperature 63.70						Adopted Mean Temperature 61.95						Adopted Mean Temperature 54.50					
Rainfall 2.25						Rainfall 1.85						Rainfall 3.68					

TABLE OF METEOROLOGICAL OBSERVATIONS

From October to December, 1876.

OCTOBER.						NOVEMBER.						DECEMBER.					
Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.
		Highest.	Lowest.					Highest.	Lowest.					Highest.	Lowest.		
1	29.9	59.0	46.0	NE	.05	1	30.3	50.0	37.0	NW	.00	1	29.3	48.0	35.0	SSE	.05
2	30.1	55.0	39.0	NNE	.00	2	30.1	53.0	39.0	NW	.00	2	29.2	51.0	38.0	ESE	.32
3	29.9	56.0	46.0	SE	.16	3	30.0	54.0	44.0	SW	.00	3	28.9	57.0	43.0	SE	.82
4	29.6	63.0	50.0	SSE	.44	4	30.2	53.0	46.0	NE	.01	4	28.4	51.0	44.0	SE	.14
5	29.7	70.0	49.0	SW	.03	5	30.2	53.0	45.0	WSW	.01	5	28.7	49.0	42.0	SW	.08
6	29.7	62.0	53.0	SSW	.00	6	30.2	48.0	42.0	NNW	.05	6	28.6	50.0	43.0	WSW	.35
7	29.7	71.0	56.0	SW	.04	7	30.2	50.0	36.0	NNW	.22	7	29.1	47.0	39.0	SW	.00
8	29.8	62.0	55.0	SW	.03	8	30.1	41.0	32.0	NW	.41	8	29.5	45.0	37.0	NNW	.00
9	29.3	66.0	53.0	SW	.36	9	30.0	44.0	33.0	E	.31	9	29.9	48.0	38.0	WNW	.00
10	29.2	68.0	50.0	SW	.03	10	30.1	36.0	31.0	NW	.10	10	30.0	47.0	40.0	W	.00
11	29.0	68.0	46.0	S	.03	11	29.9	44.0	29.0	SW	.10	11	29.9	47.0	40.0	SW	.00
12	29.4	67.0	45.0	SW	.14	12	29.5	46.0	31.0	SE	.00	12	29.4	47.0	40.0	SW	.00
13	29.4	59.0	49.0	SE	.46	13	29.6	40.0	38.0	ESE	.39	13	29.6	45.0	35.0	SW	.06
14	29.5	59.0	47.0	S	.09	14	29.6	52.0	38.0	NE	.09	14	29.8	42.0	34.0	SSE	.00
15	29.7	57.0	44.0	SW	.00	15	29.3	54.0	42.0	SW	.39	15	29.8	45.0	36.0	SSE	.00
16	29.6	58.0	46.0	SSE	.01	16	29.4	51.0	43.0	ENE	.05	16	29.8	45.0	39.0	SSE	.02
17	29.6	62.0	51.0	SSE	.00	17	29.6	52.0	46.0	SW	.24	17	29.7	46.0	41.0	SE	.16
18	29.6	57.0	45.0	SE	.00	18	29.9	53.0	41.0	SW	.00	18	29.4	44.0	39.0	ESE	.30
19	29.8	57.0	52.0	SE	.00	19	29.6	55.0	44.0	NW	.16	19	29.1	45.0	38.0	ESE	.20
20	30.1	59.0	51.0	ENE	.00	20	29.7	48.0	40.0	NW	.07	20	28.8	44.0	38.0	ESE	.19
21	30.2	57.0	47.0	NE	.00	21	30.0	47.0	39.0	NW	.00	21	28.8	44.0	38.0	ENE	.68
22	30.2	54.0	47.0	SE	.00	22	30.1	49.0	42.0	SSW	.13	22	28.9	41.0	37.0	SW	.55
23	30.2	54.0	46.0	ESE	.08	23	30.1	43.0	34.0	SSW	.00	23	29.3	36.0	30.0	SW	.00
24	30.0	53.0	46.0	NE	.00	24	29.9	45.0	35.0	SSE	.00	24	29.6	41.0	32.0	SE	.47
25	30.2	59.0	42.0	NW	.00	25	29.6	46.0	39.0	SE	.05	25	29.9	36.0	32.0	SE	.17
26	30.2	51.0	41.0	SSW	.00	26	29.4	46.0	38.0	SSW	.36	26	30.1	37.0	31.6	S	.02
27	30.2	55.0	42.0	SW	.00	27	29.3	46.0	38.0	SW	.04	27	29.5	47.0	28.0	SW	.34
28	30.2	56.0	46.0	NW	.00	28	29.4	43.0	35.0	NW	.00	28	29.3	51.0	35.0	SW	.16
29	30.0	55.0	51.0	WSW	.00	29	29.3	42.0	31.0	WSW	.00	29	29.6	47.0	41.0	SW	.06
30	30.0	47.0	42.0	NE	.00	30	29.6	47.0	29.0	WNW	.00	30	29.4	47.0	40.0	SW	.48
31	30.1	48.0	36.0	N	.00							31	28.9	50.0	42.0	SW	.33
Mean Height of Barometer in Month 29.80						Mean Height of Barometer in Month 29.80						Mean Height of Barometer in Month 29.36					
Adopted Mean Temperature 51.50						Adopted Mean Temperature 42.65						Adopted Mean Temperature 41.55					
Rainfall 1.89						Rainfall 3.18						Rainfall 5.83					

XXII.

CASES in which Premises were visited by the Medical Officer of Health and Sanitary Inspectors, on account of Infectious Diseases prevailing therein.

Diseases.	No. of Cases.	Bedding and Articles of Clothing Burned to Prevent Contagion, and Houses Disinfected.	No.
Typhus Fever.....	26	Feather Beds	2
Typhoid „	50	Flock and Chaff ditto	9
Other „	61	Mattresses	5
Scarlatina	308	Pillows, &c.....	2
Measles	237	Sheets, &c.	
Diphtheria	15	Houses Disinfected by	
Whooping Cough	115	the Inspector	26
Croup	8		
Diarrhœa	130		
Total	950	Total	42

LIST OF CASES in which it was found necessary to adopt Magisterial proceedings.

Particulars of Complaint.	No. of Cases.	How Disposed of.	Penalties Imposed.
Depositing Offensive Matter on the Street, Obstructing, and Bye-Laws	17	Seven Fined 10s.; Five, 5s.; one, 2s. 6d.; one, 1s.; and one to pay costs	4 18 6
Ash-pits, Privies, Water Closets, and Premises in such a state as to be a Nuisance and Injurious to Health	194	90 Orders to abate made, 103 cases withdrawn, one dismissed, and one fined.....	10s. and Costs.
Exposing Unsound Food for Sale	1	Dismissed.....	
Adulteration of Food	2	Both fined 20s.	2 0 0
Common Lodging House (Public Health Act)	1	Fined 5s.	0 5 0
	215		£7 13 6

XXIII.

*Number of Persons summoned under the Sanitary
Acts :--*

Sanitary Acts.	Number of Persons.	Convicted.	Dis- charged.	Nuisances abated and Summonses withdrawn on payment of Costs.
Public Health Act	260	112	3	145
Common Lodging Houses	1	1	..	..
Selling and Exposing for Sale Unsound Food	1	..	1	..
Adulteration of Food Act	2	2	..	..
Bye-Laws	17	15	2	..
Total	281	130	6	145

*TABLE shewing the amount of Bad Meat and other
unwholesome Articles of Food seized and
destroyed during 1876.*

Class of Food Seized.	No. of Seizures.	Weight in Pounds Seized and Destroyed.	No. of Persons Summoned.	No. of Convictions.	Amount of Penalties Imposed
Beef and Mutton	3	1122	..	..	..
Pork	1	119	..	..	..
Salt Beef	1	1344	1	..	..
Hams and Bacon	3	504	..	..	..
Fruit	3	..	..	..	..
Dates .....	..	70	..	..	..
Onions .....	..	126	..	..	..
Preserved Fruit	1	46 Jars.	..	..	..
Oysters	1	3 Baskets.	..	..	..
Total	12		1		

XXIV.

NUISANCES REPORTED, and NOTICES SERVED
by Sanitary Inspectors, during the Year :--

Number of Nuisances Reported	2,891
Nuisance abated without formal Notice	350
Nuisances abated after Notice without proceedings	2,347
Nuisances abated after proceedings had been taken	194
Number of formal Notices given	8,482
Complaints made at Office, and attended to by Inspectors	680
Orders of Magistrates to abate Nuisances... ..	112

Notices served :--

To Repair Defective House Drains, Water Closets, &c.....	657
To Whitewash Premises, Cleanse Ash-pits, &c.	7,933
Defective Spouts	84
Houses Unfit for Human Habitation	14
Dangerous Buildings	33
To Abate Smoke Nuisances	9
To Cleanse and Disinfect Houses wherein Zymotic Diseases had occurred.....	557
Total	9,287

Ash-pits Cleansed by Corporation :--

Orders taken by Inspectors during inspection, and Private Orders received at the Office	2,746	Number of Loads removed	5,231
Orders received for Cleans- ing by Yearly Contract :			
January to May 13th	15	Do. do.	2,074
Total.....	2,761	Total	7,305

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DEATHS Registered in the Borough of Sunderland during the Year ending December 30th, 1876.

[illegible]



THE BOROUGH OF
SUNDERLAND

1877.

JOHN CHARTERIS & CO. GENERAL PRINTERS, CAYTON HOUSE, NEWCASTLE-ON-TYNE

POPULATION OF BOROUGH
as follows:-

Districts:-	
East Sunderland	10,890
West do	8,335
North Bishopwearmouth	30,250
South do	33,450
Monkwearmouth	27,057
Total	110,382
Total acreage	3,032.



	CASES	DEATHS
TYPHUS FEVER	•	x
TYPHOID FEVER	•	x
SCARLATINA	•	x
DIARRHEA	•	x

- REGISTRATION DISTRICTS
- Municipal Boundary
 - East Sunderland
 - West do.
 - North Bishopwearmouth
 - South do.
 - Monkwearmouth

